FIG. 1

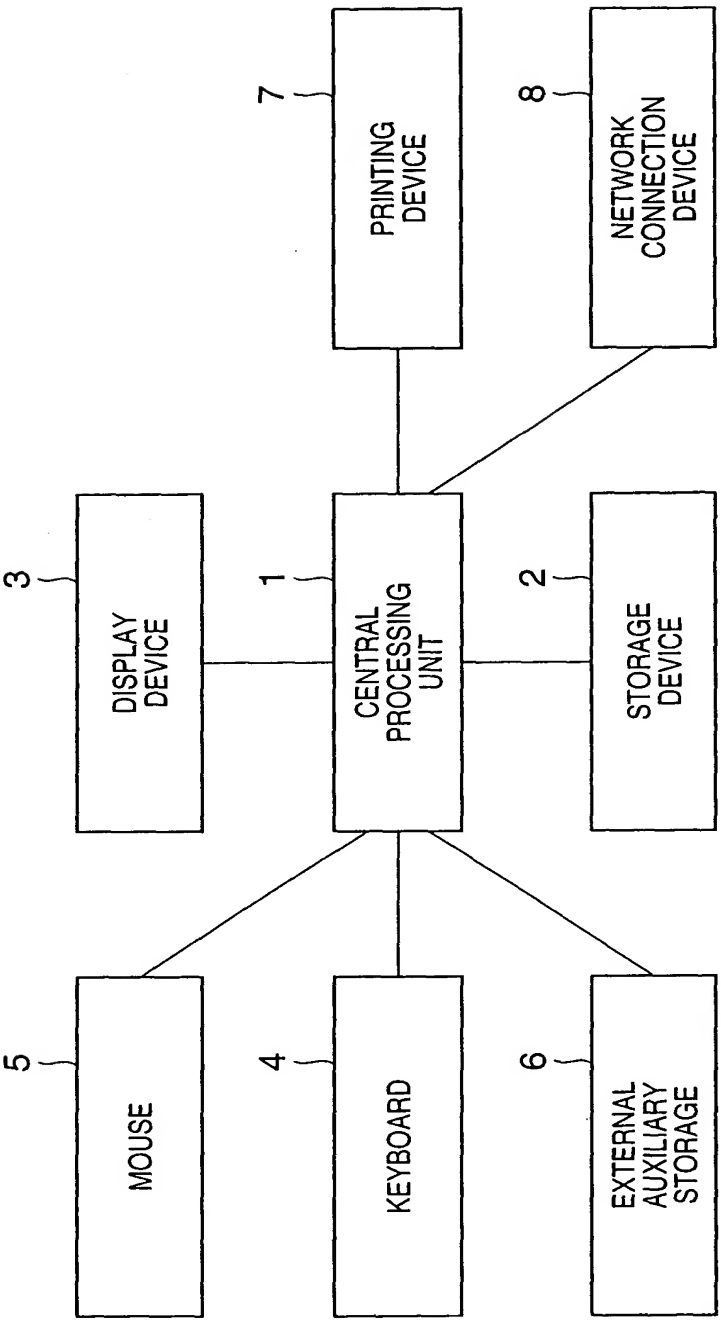

7
PRINTING DEVICE
8
NETWORK CONNECTION DEVICE
3
DISPLAY DEVICE
1
CENTRAL PROCESSING UNIT
2
STORAGE DEVICE
5
MOUSE
4
KEYBOARD
6
EXTERNAL AUXILIARY STORAGE

FIG. 2

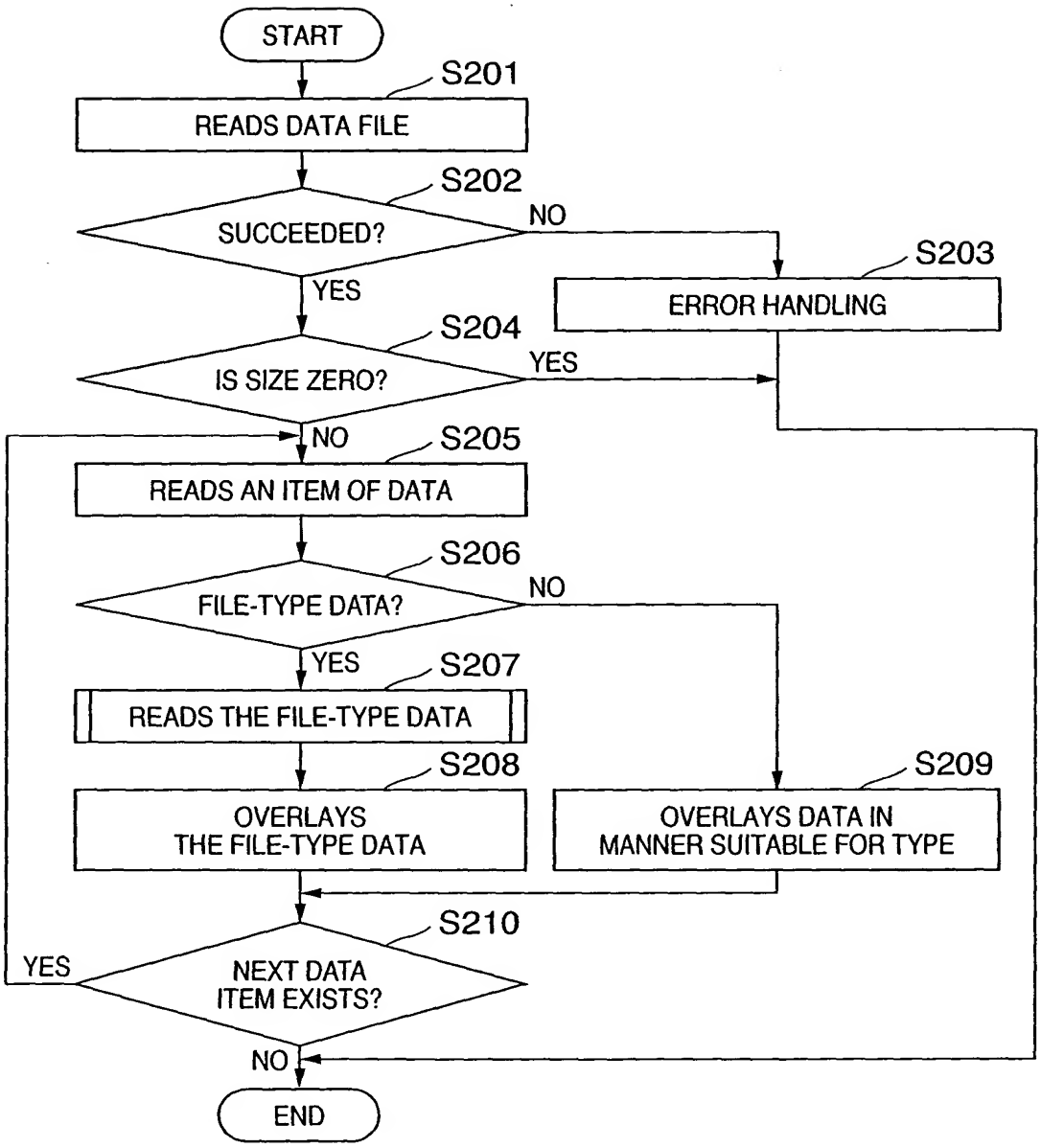

START
S201
READS DATA FILE
S202
SUCCEEDED?
NO
S203
ERROR HANDLING
YES
S204
IS SIZE ZERO?
YES
NO
S205
READS AN ITEM OF DATA
S206
FILE-TYPE DATA?
NO
YES
S207
READS THE FILE-TYPE DATA
S208
OVERLAYS THE FILE-TYPE DATA
S209
OVERLAYS DATA IN MANNER SUITABLE FOR TYPE
S210
NEXT DATA ITEM EXISTS?
YES
NO
END

FIG. 3

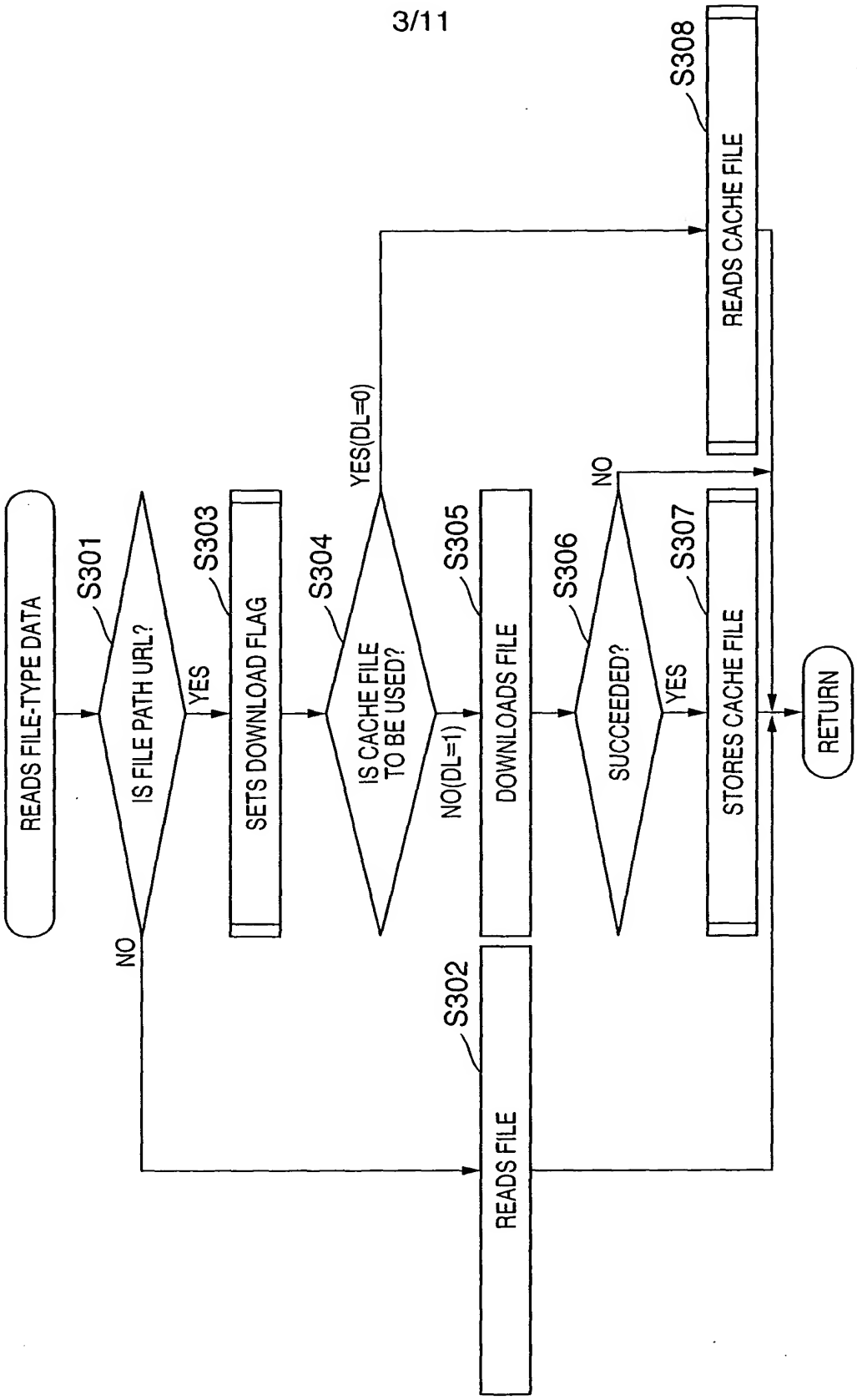

READS FILE-TYPE DATA
S301
IS FILE PATH URL?
YES
S303
SETS DOWNLOAD FLAG
S304
IS CACHE FILE TO BE USED?
YES(DL=0)
S308
READS CACHE FILE
NO(DL=1)
S305
DOWNLOADS FILE
S306
SUCCEEDED?
NO
S307
STORES CACHE FILE
NO
S302
READS FILE
RETURN

FIG. 4

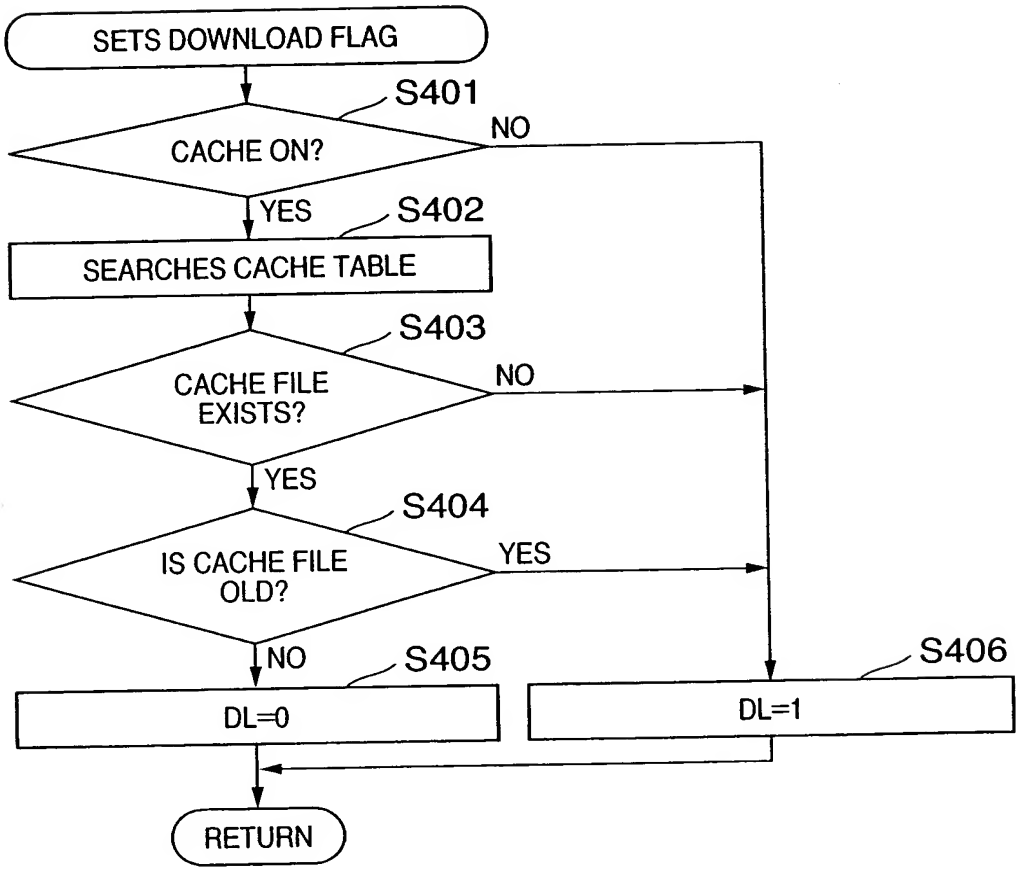

SETS DOWNLOAD FLAG
S401
CACHE ON?
NO
YES
S402
SEARCHES CACHE TABLE
S403
CACHE FILE EXISTS?
NO
YES
S404
IS CACHE FILE OLD?
YES
NO
S405
DL=0
S406
DL=1
RETURN

FIG. 5

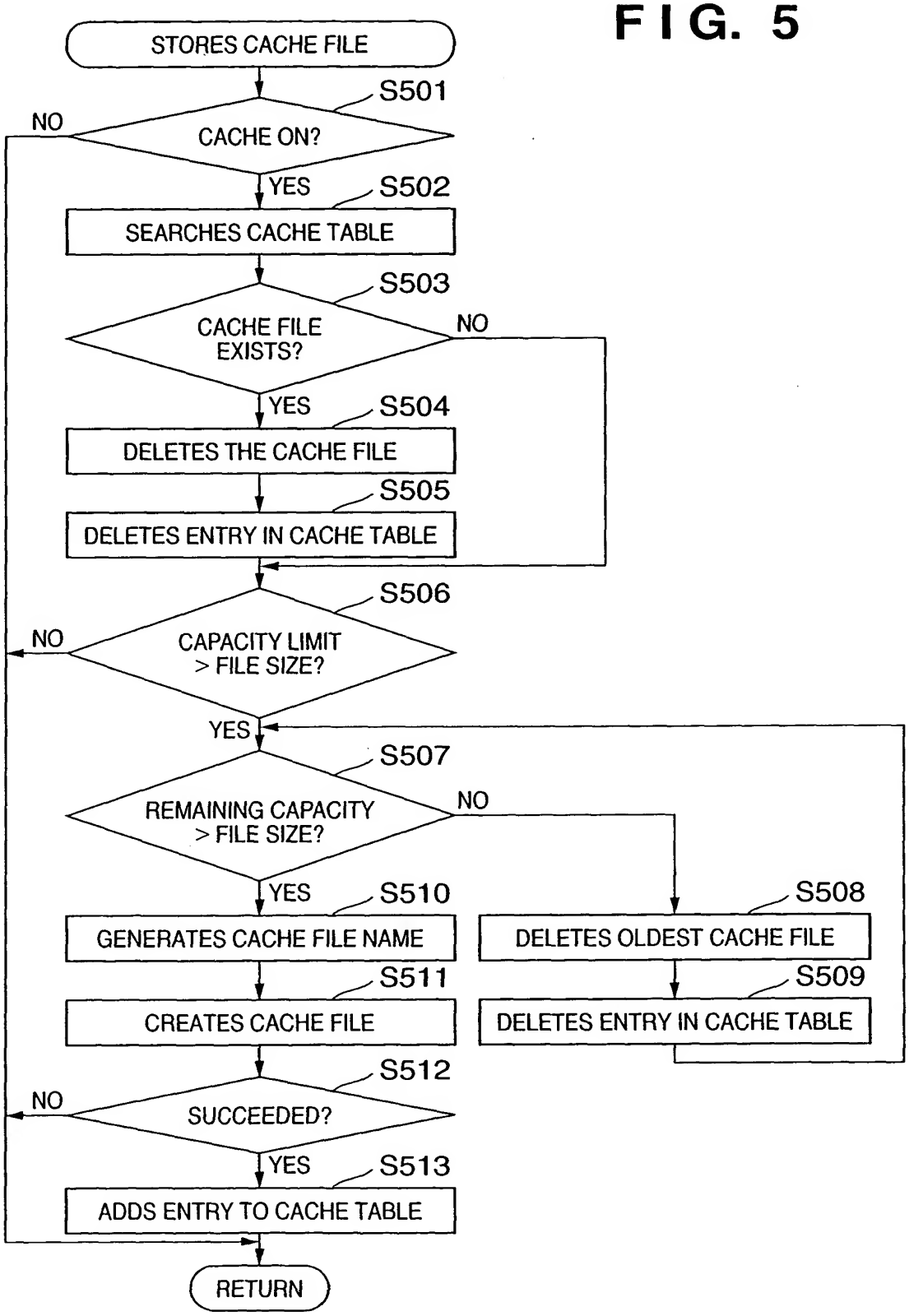

STORES CACHE FILE
S501
CACHE ON?
NO
YES
S502
SEARCHES CACHE TABLE
S503
CACHE FILE EXISTS?
NO
YES
S504
DELETES THE CACHE FILE
S505
DELETES ENTRY IN CACHE TABLE
S506
CAPACITY LIMIT > FILE SIZE?
NO
YES
S507
REMAINING CAPACITY > FILE SIZE?
NO
YES
S510
GENERATES CACHE FILE NAME
S511
CREATES CACHE FILE
S512
SUCCEEDED?
NO
YES
S513
ADDS ENTRY TO CACHE TABLE
RETURN
S508
DELETES OLDEST CACHE FILE
S509
DELETES ENTRY IN CACHE TABLE

FIG. 6

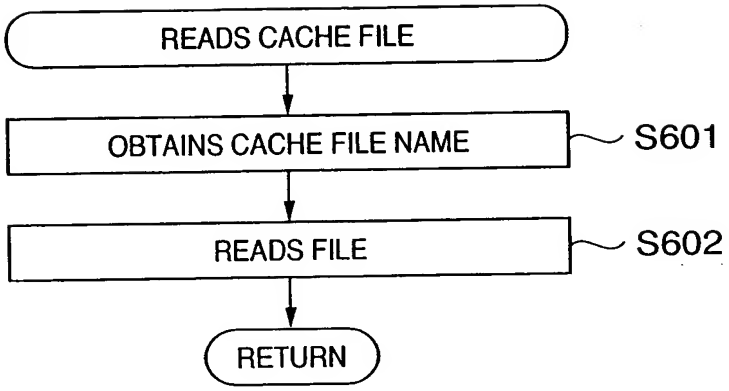

READS CACHE FILE
OBTAINS CACHE FILE NAME
S601
READS FILE
S602
RETURN

FIG. 7

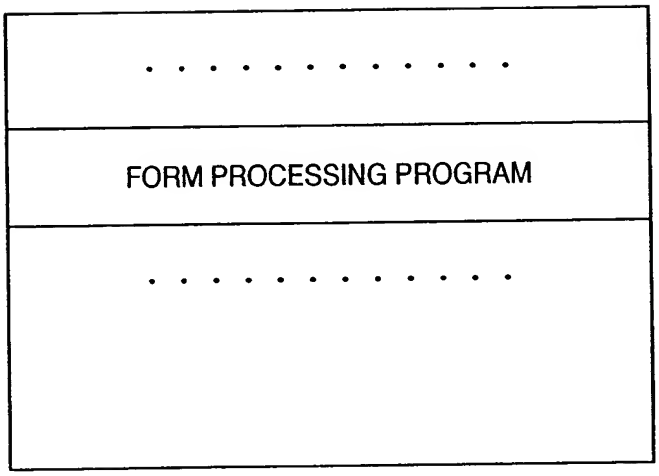


FIG. 8

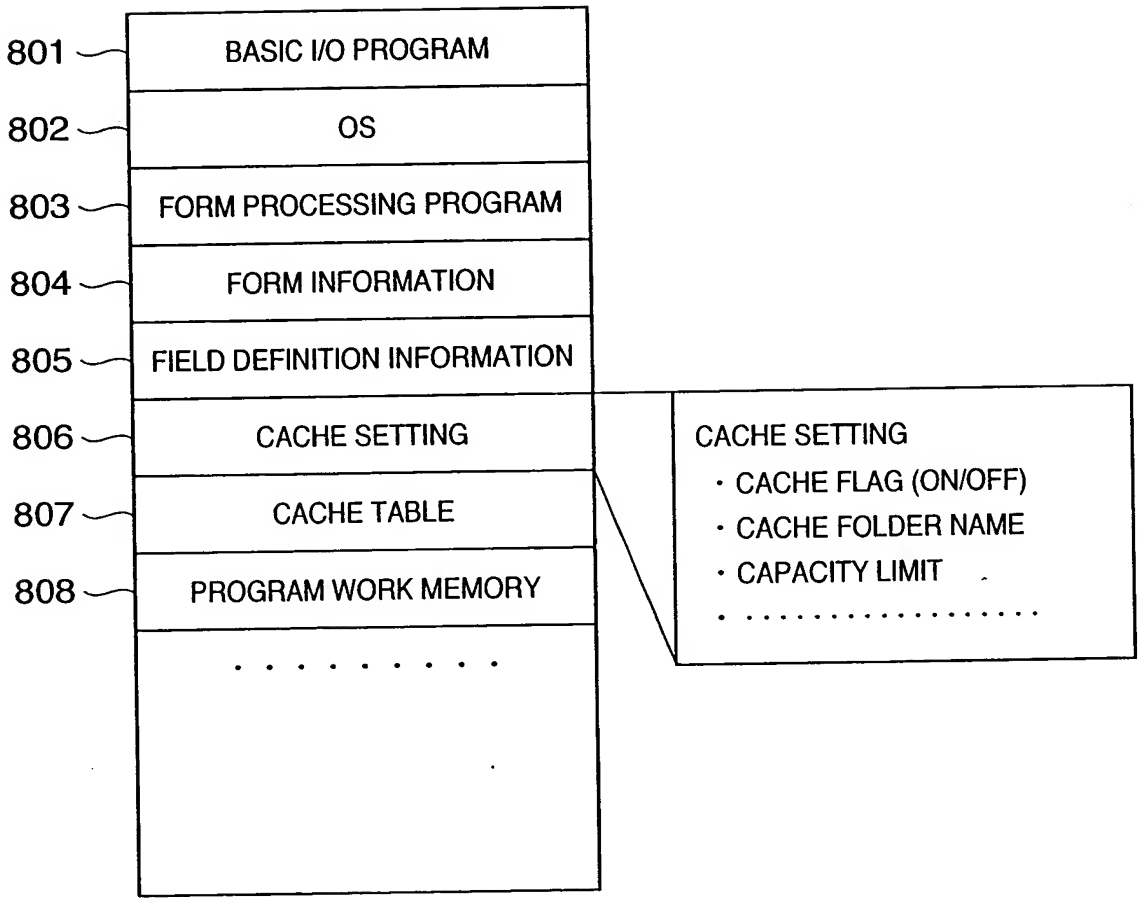

801
BASIC I/O PROGRAM
802
OS
803
FORM PROCESSING PROGRAM
804
FORM INFORMATION
805
FIELD DEFINITION INFORMATION
806
CACHE SETTING
807
CACHE TABLE
808
PROGRAM WORK MEMORY
CACHE SETTING
• CACHE FLAG (ON/OFF)
• CACHE FOLDER NAME
• CAPACITY LIMIT

FIG. 9A

FIELD DATA FILE

NAME=TYOHYO TARO
ADDRESS=KAWASAKI-SI KANAGAWA
PICTURE=http://www.server.com/taro.jpg
NAME=TYOHYO JIRO
ADDRESS=KAWASAKI-SI KANAGAWA
PICTURE=http://www.server.com/jiro.jpg
⋮

FIG. 9B

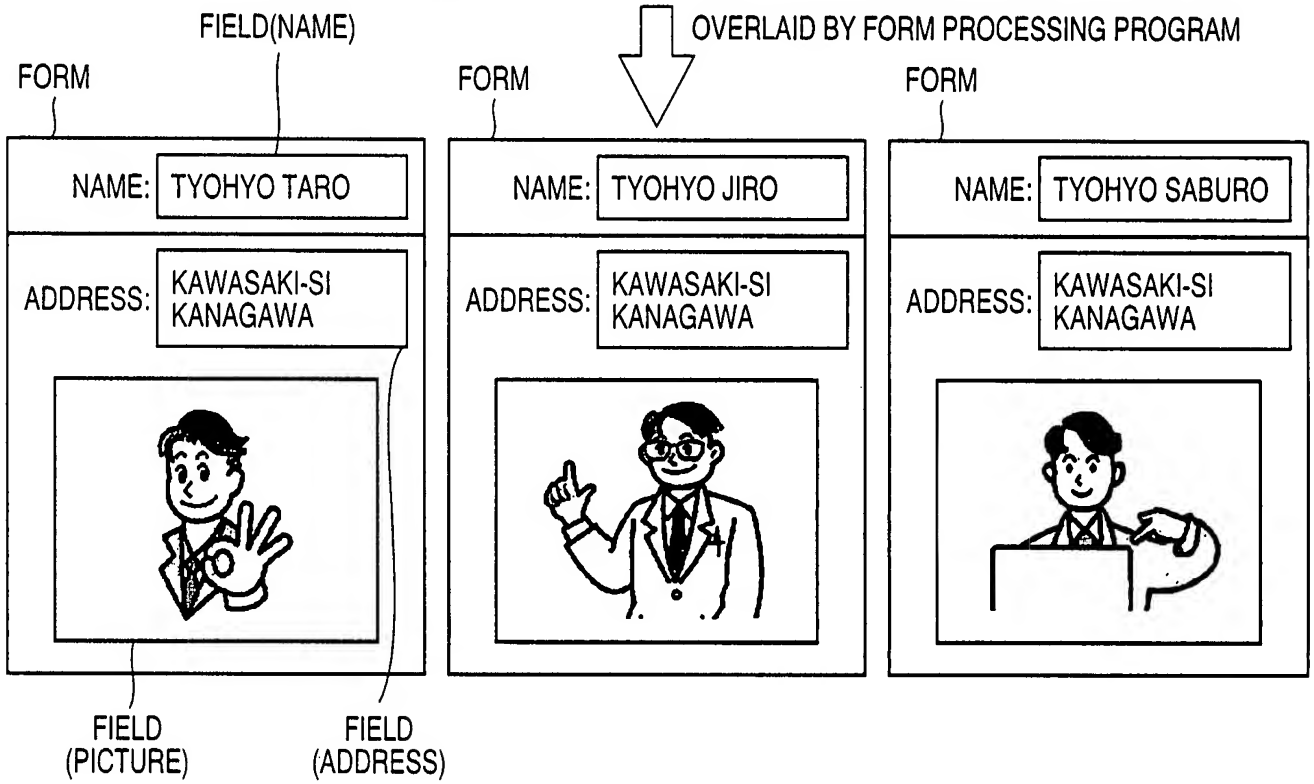
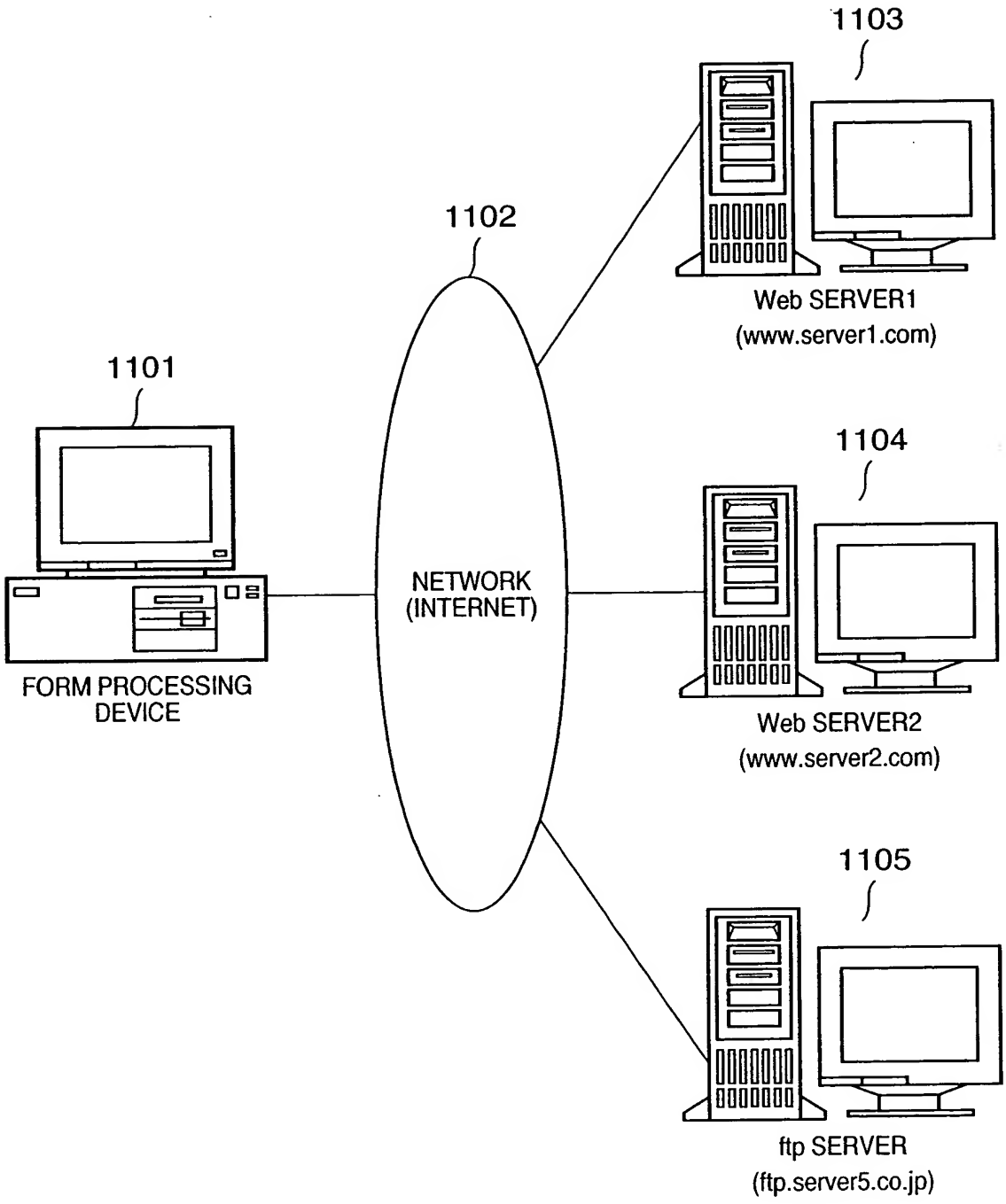


FIG. 10

CACHE NAME	ORIGINAL FILE ADDRESS	TIME STAMP
00000001.jpg	http://www.server1.com/image1.jpg	2001/05/14
00000002.gif	http://www.server2.com/picture.gif	2001/06/13
00000003.bmp	ftp://ftp.server5.co.jp/table.bmp	2001/06/29
. . . . .	. . . . .	. . . . .

FIG. 11


1103
1102
Web SERVER1
(www.server1.com)
1101
1104
NETWORK
(INTERNET)
FORM PROCESSING
DEVICE
Web SERVER2
(www.server2.com)
1105
ftp SERVER
(ftp.server5.co.jp)